SEMESTER EXAMINATION, DECEMBER, 2025

Course Name: - B-Tech | **Semester:- 1st**

Paper Name: - Manufacturing Practices | **Paper Code:-NES-105**

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. | **Max Marks-70**

समय– 3 घण्टे + 20 मिनट प्रति घंटे अतिरिक्त–दृष्टिबाधित एवं सह लेखक परीक्षार्थियों के लिए। | अधिकतम अंक–70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries **3 mark. All questions are compulsory.**
- Section B- Answer any **5 out of 7** given questions. Each question carries **7 marks.**
- Section C- Answer any **2 out of 3** given questions. Each question carries **10 marks.**

Section – A (खण्ड–अ)

Multiple Choice Questions (बहुविकल्पीय प्रश्न)

1. Answer all the following questions. 5x3 =15
निम्नलिखित सभी प्रश्न अनिवार्य हैं।

i) The ability of a material to resist abrasion and scratching is called?

(a) Toughness

(b) Hardness

(c) Elasticity

(d) Ductility

ii) In extrusion metal forming process, metal flows due to?

(a) Compressive force

(b) Shear force

(c) Tensile force

(d) Impact force

iii) Flux in welding is used to?

(a) Increase heat

(b) Remove slag

(c) Increase strength

(d) Prevent oxidation

iv) Which of the following cannot be used as an alloying element in steel?

(a) Lead

(b) Chromium

(c) Nickel

(d) Tungsten

v) The following figure represents which rolling defect?

(a) Alligatoring

(b) Zipper cracks

(c) Alligatoring

(d) Wavy Edges

Section – B (खण्ड–ब)
Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions. **5x7=35**

i. What is Deformation? Explain elastic and plastic deformation illustrating suitable examples?

ii. Explain plain carbon steel along with its classification and applications ?(clearly mentioning percentage of carbon in each)

iii. Explain the principle of rolling process with neat sketch and also describe different types of rolling mills with the help of diagrams?

iv. Differentiate between Brazing, Welding and Soldering?

v. What is forging operation and also explain open die and impression die forging with illustrative diagrams?

vi. Explain principle of resistance welding with neat sketch and its types? What are the advantages, disadvantages and applications of resistance welding?

vii. Write short notes on following?
(a) Counter Boring and Counter Sinking Operation performed on Drilling Machine.
(b) Grey Cast Iron and White Cast Iron.
(c) Casting Defects

Section – C (खण्ड–स)
Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question. **2x10=20**

i) Define pattern allowances and what is the main purpose of providing pattern allowance in casting and also explain types of pattern allowances with suitable diagrams?

ii) Explain different parts of Lathe machine with neat sketch? And also discuss various operations performed on it?(any five operation need to be discussed with diagrams)

iii) Explain the principle of arc welding along with components of arc welding setup with the help of neat sketch and also discuss advantages, limitations and applications of arc welding?

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